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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
09/988,523	11/20/2001	Yoichi Nakajima	216365US8	8609				
22850	7590	03/01/2004	<table border="1"> <tr> <td colspan="2">EXAMINER</td> </tr> <tr> <td colspan="2">BARTH, VINCENT P</td> </tr> </table>		EXAMINER		BARTH, VINCENT P	
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			<table border="1"> <tr> <td>ART UNIT</td> <td>PAPER NUMBER</td> </tr> <tr> <td>2877</td> <td></td> </tr> </table>		ART UNIT	PAPER NUMBER	2877	
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2877								
DATE MAILED: 03/01/2004								

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/988,523

Applicant(s)

NAKAJIMA ET AL.

Examiner

Vincent P. Barth

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Referring to Claim 1, in the language directly following the preamble, “a first step ... will have a predetermined angle relative to a predetermined *reference axis*,” (emphasis added), is used in a manner which renders the claim indefinite. In particular, the “reference axis” is not described such that those practicing the invention can determine the relationship of the reference axis with the remaining device components upon which the method claim is based. Moreover, any reference angle pertaining thereto becomes problematic. The Examiner suggests that the claim should include some reference to a known axis, for example, a known optical axis of a lens (or other suitable known axis) to which the reference axis is co-linear. In this way, those practicing the invention may use as a known axis as a basis for determining the relative location and orientation of a reference axis. MPEP §2173.02 states that, “If the scope of the invention sought to be patented cannot be determined from the language of the claims with a reasonable degree of certainty, a rejection of the claims under 35 U.S.C. 112, second paragraph is

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appropriate.”, citing In re Wiggins, 488 F.2d 538, 179 USPQ 421 (CCPA 1973). However, the claim has been discussed below as it may best be understood.

4. Referring to Claims 2-5, the fourth paragraph of 35 U.S.C. §112 provides that, “A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers”. Accordingly, Claims 2-4 inherit the §112 second paragraph rejection of Claim 1, and are therefore rejected as well. However, Claims 2-4 have also been discussed below, as each may best be understood.

5. Referring to Claims 3-5, “reference planes” are identified as limitations, which appear to be discussed in the Specification at page 9, last full paragraph. However, the meaning of such reference planes is not clear, in that there does not appear to be a relationship between the reference planes, and any physical component of the device upon which the method claim is based. A method claim in the context of the present invention would ordinarily involve either some manipulation of device components, some manipulation of light beams, or some calculations (for example, a calculation of a focal length, etc.). Since the reference planes do not appear to fit into any of these general categories, meaning of the limitation is not clear.

Moreover, the portion of the Specification which might define or clarify the reference planes (pg. 9, last full paragraph; and Fig. 4A), does not sufficiently resolve this matter. In this connection, Claim 3 recites the limitation that “bright spots” appear on the reference planes, suggesting that said planes correspond to a physical feature on the device, although it is not clear that such physical features appear in Figure 4A. The Examiner respectfully requests that Applicant provide an explanation of the reference planes in the reply to the instant Office Action, preferably in which there is some relation to a manipulation of the physical components or light

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beams of the device upon which the method is based. In the alternative, since the Specification and Drawings do not provide a sufficiently enabling disclosure to allow those of skill in the art to practice the invention, the claims are rejected under §112 first paragraph. Upon the resolution of the issues concerning the reference planes, a further consideration of the claim language will be afforded Applicant, as well as distinguishing features between the prior art and the instant invention.

6. Referring to Claim 6, the term, “*the* reference axis” (emphasis added), is used in a manner which renders the claim indefinite. Firstly, the reference axis is rejected for the same reasons as set forth above in the rejection of Claim 1, which rejection is repeated and incorporated herein by reference. Therefore, the Examiner respectfully requests that any response or remedy that Applicant provides for Claim 1 be similarly applied to Claim 6 with regard to the reference axis. Secondly, and as emphasized by italics above, the reference axis is introduced by the definite article without having first introduced the term with the indefinite article (i.e. *a* reference axis). Therefore, the claim is indefinite under §112, for lacking an antecedent basis for the feature. See MPEP §2173.05(e). The Examiner suggests that the remedy would involve simply amending the claim to: “*a* reference axis”.

7. Referring to Claim 7, the fourth paragraph of 35 U.S.C. §112 provides that, “A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers”. Accordingly, Claim 7 inherits the §112 second paragraph rejection of Claim 6, and is therefore rejected as well. However, Claim 7 has also been discussed below, as it may best be understood.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimaoka, et al., U.S. Patent No. 5,195,155 (16 Mar., 1993).

10. Referring to Claims 1 and 2, Shimaoka discloses a system for making a module optically coupling a semiconductor light emitting diode laser 3 to a fiber optic element 22 (see Fig. 7; col. 15, ln. 58 to col. 16, ln. 60). Shimaoka discloses that the fiber receives a condensed laser beam from a condensing lens 18, which is adjusted at an angle Psi relative to a reference axis illustrated in relation to the fiber 22 (Fig. 7). The condensing lens receives light emitted from a package which includes the laser diode 3 and a collimating lens 4, the attitude of which is adjusted such that the light emitted from the package and passing through the condensing lens 18 is at an angle Psi with respect to said reference axis (Fig. 7; col. 4, ln. 54 to col. 6, ln. 36; and col. 16, lns. 1-31). Upon the resolution of the §112 rejections above concerning the reference axis and angles, further consideration of the reference axis and angle claim language will be afforded Applicant, as well as distinguishing features between the prior art and the instant invention. Shimaoka does not explicitly disclose a lens fixation end face for mounting the condensing lens

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on the package, however, Shimaoka discloses that the condensing lens may be fixedly assembled to at least one optical coupling end surface of an optical isolator 12 (col. 7, lns. 45-48).

Shimaoka does not explicitly disclose the manner in which the relative angles in Figure 7 are detected, however, implicit in the reference are such attendant inclination measuring means such that meaningful adjustments can be made to meet the stated goal of the Shimaoka invention wherein optical coupling is maximized. See MPEP §2144.01. Shimaoka discloses that the package and the package angle is adjusted to maximize coupling (col. 16, lns. 27-31), corresponding to the instant claim language in which the desired amount of the laser is coupled with the optical fiber.

11. Referring to Claims 6 and 7, Shimaoka discloses a system for making a module optically coupling a semiconductor light emitting diode laser 3 to a fiber optic element 22 (see Fig. 7; col. 15, ln. 58 to col. 16, ln. 60). Shimaoka discloses that the fiber receives a condensed laser beam from a condensing lens 18, which is adjusted at an angle  $\Psi$  relative to a reference axis illustrated in relation to the fiber 22 (Fig. 7). The condensing lens receives light emitted from a package which includes the laser diode 3 and a collimating lens 4, the attitude of which is adjusted such that the light emitted from the package and passing through the condensing lens 18 is at an angle  $\Psi$  with respect to said reference axis (Fig. 7; col. 4, ln. 54 to col. 6, ln. 36; and col. 16, lns. 1-31). Upon the resolution of the §112 rejections above concerning the reference axis and angles, further consideration of the reference axis and angle claim language will be afforded Applicant, as well as distinguishing features between the prior art and the instant invention. Shimaoka does not explicitly disclose a lens fixation end face for mounting the condensing lens on the package, however, Shimaoka discloses that the condensing lens may be fixedly assembled

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to at least one optical coupling end surface of an optical isolator 12 (col. 7, lns. 45-48).

Shimaoka does not explicitly disclose the manner in which the relative angles in Figure 7 are detected, however, implicit in the reference are such attendant inclination measuring means such that meaningful adjustments can be made to meet the stated goal of the Shimaoka invention wherein optical coupling is maximized. See MPEP §2144.01. Shimaoka discloses that the package and the package angle is adjusted to maximize coupling (col. 16, lns. 27-31), corresponding to the instant claim language in which the desired amount of the laser is coupled with the optical fiber.


### *Comments*

12. The Specification (pg. 5, last full paragraph to pg. 6, first paragraph), does not identify the figure which corresponds to the reference numerals set forth therein. It appears that Figure 7 was the intended figure. If so, the Examiner suggests a simple remedy, in which the last full paragraph of page 5 is perhaps amended as follows: “Fig. 7 illustrates that by gradually changing the position ...”. The inclusion of such language would not introduce new matter, since the subject matter, namely the elements in Figure 7, had already been disclosed, and the figure number had merely been omitted.



***CONCLUSION***

13. Applicants' Claims 1-7 are rejected based on the reasons set forth above.
14. Any inquiries concerning this communication from the Examiner should be directed to Vincent P. Barth, whose telephone number is 571-272-2410, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday. The fax number for the group before final actions is 703-872-9306.
15. If attempts to reach the Examiner prove unsuccessful, the Examiner's supervisor is Frank G. Font, who may be reached at 571-272-2415.
16. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Frank G. Font  
Supervisory Patent Examiner  
Technology Center 2800